



Cofe

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Attorney Docket No. 13215ROUS01U)

In the Patent of:
Li, et al

Patent No.: 7,092,727

Date of Patent: 08/15/2006

Serial No.: 09/708,782

For: APPARATUS AND METHOD
FOR SUPPORTING DIFFERENTIATED
PACKET DATA SERVICES WITHIN
A WIRELESS NETWORK

§ Group Art Unit: unknown

§

§ Examiner: unknown

§

§

§

§

§

§

§

§

§

§

CERTIFICATE OF MAILING UNDER RULE 8

I hereby certify that this correspondence is being deposited in the United States Mail with sufficient First Class Postage and is addressed to: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on Oct. 5, 2006.

By:

Diane Hudson
Diane Hudson

REQUEST FOR CERTIFICATE OF CORRECTION

Attn: Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Certificate
OCT 13 2006
of Correction

Dear Sir:

Patentee hereby requests the issuance of a certificate of correction for error on the part of the patent office. As shown on the attached first page of the publication which was retrieved from the United States Patent & Trademark Office official website, the complete and correct spelling of the 4th named inventor is "Mazda Salmanian", not "Mazda Salmanlan" which was printed on the certificate. Therefore, we respectfully request that the name be changed. No fees are required on our part.

Respectfully submitted,

Date: October 5, 2006

By: /Bruce E. Garlick, Reg. No. 36,520/
Bruce E. Garlick, Reg. No. 36,520

GARLICK HARRISON & MARKISON

P. O. Box 160727
Austin, Texas 78716
(512) 264-8816 office
(512) 264-3735 fax

OCT 16 2006



US007092727B1

(12) **United States Patent**
Li et al.

(10) **Patent No.:** **US 7,092,727 B1**
(45) **Date of Patent:** **Aug. 15, 2006**

(54) **APPARATUS AND METHOD FOR
SUPPORTING DIFFERENTIATED PACKET
DATA SERVICES WITHIN A WIRELESS
NETWORK**

(75) Inventors: **Xiao-Dong Li**, Ottawa (CA); **Patrick
Lie Chin Cheong**, Nepean (CA);
Ashraf S. Mahmoud, Nepean (CA);
Mazda Salmanian, Kanata (CA)

(73) Assignee: **Nortel Networks Limited**, St. Laurent
(CA)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 1196 days.

(21) Appl. No.: **09/708,782**

(22) Filed: **Nov. 8, 2000**

(51) Int. Cl.
H04Q 7/20 (2006.01)

(52) U.S. Cl. **455/466; 455/426.1; 455/426.2;
455/560; 455/561; 370/329; 370/348; 370/352;
370/395.1; 370/395.2; 370/400; 370/469;
370/474; 370/395.5**

(58) **Field of Classification Search** **370/338,
370/328, 329, 345, 348, 349, 351, 352, 395.1,
370/395.2, 395.21, 400, 401, 419, 420, 463,
370/465, 469, 466, 474, 395.5; 455/426.1,
455/426.2, 560, 561, 466**

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,819,043 A * 10/1998 Baugher et al. 709/222
6,307,867 B1 * 10/2001 Roobol et al. 370/470
6,366,761 B1 * 4/2002 Montpetit 455/12.1
6,434,141 B1 * 8/2002 Oz et al. 370/352
6,438,114 B1 * 8/2002 Womack et al. 370/329
6,438,370 B1 * 8/2002 Einola et al. 455/422.1
6,507,567 B1 * 1/2003 Willars 370/321
6,542,739 B1 * 4/2003 Garner 455/427

6,546,425 B1 * 4/2003 Hanson et al. 709/227
6,553,006 B1 * 4/2003 Kalliokulju et al. 370/310
6,556,824 B1 * 4/2003 Purnadi et al. 455/434
6,567,408 B1 * 5/2003 Li et al. 370/395.31
6,574,473 B1 * 6/2003 Rinne et al. 455/436
6,594,238 B1 * 7/2003 Wallentin et al. 370/252
6,606,311 B1 * 8/2003 Wang et al. 370/338
6,608,832 B1 * 8/2003 Forslow 370/353
6,615,269 B1 * 9/2003 Suumaki 709/230
6,618,591 B1 * 9/2003 Kalliokulju et al. 370/468
6,631,125 B1 * 10/2003 Longoni et al. 370/341

(Continued)

Primary Examiner—Matthew Anderson

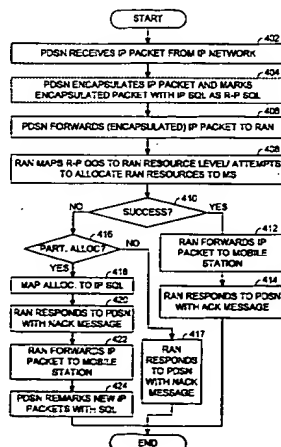
Assistant Examiner—Sujatha Sharma

(74) *Attorney, Agent, or Firm*—Garlick, Harrison &
Markison; Bruce Garlick

(57) **ABSTRACT**

A system and method manages Radio Access Network (RAN) resources to service packet data transmissions at Service Quality Levels (SQL) commensurate with packet data network SQLs. A Packet Data Serving Node (PDSN) receives a data packet from a coupled packet data network. The data packet is directed toward a Mobile Station (MS) serviced by the RAN and includes a packet SQL indicator that indicates the level of service provided by the data packet network. A corresponding set of RAN resources is allocated to meet the packet SQL indicator. If the set of RAN resources cannot be allocated, the data packet SQL indicator is remarked accordingly. In another operation, the BSC receives a data packet from a MS serviced by the RAN. The data packet is intended for a coupled packet data network and includes a packet SQL indicator. The BSC first determines a set of allocated RAN resources that are servicing the transmission of the data packet to the packet data network. The BSC then maps the allocated set of RAN resources to a RAN service quality level indicator. If the data packet SQL indicator is incorrectly marked, it is remarked by the PDSN. These operation provide support for both specific SQL operations and differential SQL operations.

46 Claims, 14 Drawing Sheets



OCT 16 2006

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 7,092,727

APPLICATION NO.: 09/708,782

ISSUE DATE : 08/15/2006

INVENTOR(S) : Xiao-Dong Li, Ottawa (CA); Patrick Lie Chin Cheong, Nepean (CA); Ashraf S. Mahmoud,
Nepean (CA); Mazda Salmanian, Kanata (CA)

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

(75) Inventors: Xiao-Dong Li, Ottawa (CA);
Patrick Lie Chin Cheong, Nepean (CA);
Ashraf S. Mahmoud, Nepean (CA);
Mazda Salmanian, Kanata (CA)

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Bruce E. Garlick
Garlick, Harrison & Markison
P. O. Box 160727
Austin, TX 78716

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

OCT 16 2006